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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,421	07/02/2003	Lucy M. Bull	005950-811	5150

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BUCHANAN INGERSOLL PC
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EXAMINER	
GRIFFIN, WALTER DEAN	
ART UNIT	**PAPER NUMBER**
1764	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,421	BULL ET AL.	
	Examiner	Art Unit	
	Walter D. Griffin	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5,14 and 16-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,14 and 16-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *071505,102505*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The rejections described in the office action mailed on June 27, 2005 have been withdrawn in view of the amendment filed on November 18, 2005. The Glass reference does not disclose the use of a catalyst comprising cobalt. Accordingly, the arguments concerning these rejections and will not be addressed.

New rejections follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-5, 14, 16-18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glass et al. (US 3,373,180) in view of Loughran (US 2,651,655).

The Glass reference discloses a process for removing contamination from a stream derived from a Fischer-Tropsch synthesis process. These streams include hydrocarbon streams. The contamination removal process comprises passing the stream to a zone in which the stream contacts a cross-linked, ion exchanging polymeric resin thereby removing iron contaminants from stream. These iron contaminants come from the catalyst and the reactor system. The resin comprises a copolymer of styrene and divinyl benzene and is a strong acid exchange resin. The resin may have sulfonic groups. See column 1, lines 9-32, 43-49, and 54-60; column 2, lines 28-32, 40-47, and 54-60; and column 20-24 and 47-55.

The Glass reference does not disclose the use of a catalyst comprising cobalt, does not disclose if the process is a continuous or batch process, does not disclose distilling the feed, and does not disclose passing the purified stream to a hydroprocessing step.

The Loughran reference discloses a process for removing contaminants from a hydrocarbon stream from an F-T process catalyzed by a catalyst such as an iron or cobalt catalyst. The process comprises passing the stream to an adsorption zone and then passing the purified stream to a hydroprocessing reactor. The Loughran reference also discloses that the stream is subjected to a distillation step. See column 1, lines 11-24 and 40-55; column 2, lines 1-42; column 3, lines 7-36; and column 5, line 19 through column 7, line 23.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Glass by using a catalyst comprising cobalt instead of an iron catalyst as suggested by Loughran because cobalt catalysts promote the same types of reactions as the iron catalysts of Glass and therefore would be expected to be effective in the process of Glass. Since iron contamination can come from the reactor system, one would still be directed to use the resin of Glass when a cobalt catalyst is used. Regarding the removal of aluminum contamination, since the resin of Glass is the same as claimed, the process of Glass would necessarily result in removal of aluminum contamination from the hydrocarbon.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Glass by operating the process in either a continuous mode or a batch mode because the hydrocarbon would be expected to be purified effectively in either mode of operation.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Glass by distilling the feed as suggested by Loughran because undesired lighter components will be removed.

It also would have been obvious to one having ordinary skill in the art the time the invention was made to have modified the process of Glass by hydrotreating the stream as suggested by Loughran because undesired components will be converted to more desired components.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glass et al. (US 3,373,180) in view of Loughran (US 2,651,655) as applied to claim 1 above, and further in view of admitted prior art.

The previously discussed references do not disclose a filtering step.

On page 3 of the specification, applicants admit that the filtering of a stream from an F-T reactor is a conventional technique in order to remove particulates that would plug catalyst beds in subsequent reactors.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of the previously discussed references by filtering because applicants admit that filtering reduces the plugging of catalyst beds in subsequent reactors.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glass et al. (US 3,373,180) in view of Loughran (US 2,651,655) and admitted prior art.

As discussed above, the Glass reference does not disclose the use of a catalyst comprising cobalt, does not disclose filtering or distilling the feed and does not disclose passing the purified stream to a hydroprocessing step.

The Loughran reference discloses a process for removing contaminants from a hydrocarbon stream from an F-T process catalyzed by a catalyst such as an iron or cobalt catalyst. The process comprises passing the stream to an adsorption zone and then passing the purified stream to a hydroprocessing reactor. The Loughran reference also discloses that the stream is subjected to a distillation step. See column 1, lines 11-24 and 40-55; column 2, lines 1-42; column 3, lines 7-36; and column 5, line 19 through column 7, line 23.

On page 3 of the specification, applicants admit that the filtering of a stream from an F-T reactor is a conventional technique in order to remove particulates that would plug catalyst beds in subsequent reactors.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Glass by using a catalyst comprising cobalt instead of an iron catalyst as suggested by Loughran because cobalt catalysts promote the same types of reactions as the iron catalysts of Glass and therefore would be expected to be effective in the process of Glass. Since iron contamination can come from the reactor system, one would still be directed to use the resin of Glass when a cobalt catalyst is used. Regarding the removal of aluminum contamination, since the resin of Glass is the same as claimed, the process of Glass would necessarily result in removal of aluminum contamination from the hydrocarbon.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Glass by distilling the feed as suggested by Loughran because undesired lighter components will be removed.

It also would have been obvious to one having ordinary skill in the art the time the invention was made to have modified the process of Glass by hydrotreating the stream as suggested by Loughran because undesired components will be converted to more desired components.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Glass by filtering because applicants admit that filtering reduces the plugging of catalyst beds in subsequent reactors.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is (571) 272-1447. The examiner can normally be reached on M-F 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter D. Griffin
Primary Examiner
Art Unit 1764

WG
January 17, 2006